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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,561	02/24/2004	Christopher J. C. Burges	MS305584.02/MSFTP562US	1279

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EXAMINER	
BRINEY III, WALTER F	

ART UNIT	PAPER NUMBER
2615	

NOTIFICATION DATE	DELIVERY MODE
10/10/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

**Application No.**

10/785,561

**Applicant(s)**

BURGES ET AL.

**Examiner**

Walter F. Briney III

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 14-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>18 June 2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1-3, 5-6, 10-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication 2002/0113824 A1 (filed 14 January 2002) (herein *Myers*) in view of US Patent Application Publication 2003/0125936 A1 (filed 15 October 2002) (herein *Dworak*).**

**Claim 1** is limited to a system for managing audio information. *Myers* discloses a graphic user interface (GUI) that is usable as a commercial digital jukebox interface, which entails managing audio information by viewing and manipulating stored audio CDs. *Myers* at fig.1 & ABSTRACT. The GUI provides an administrative and an owner-mode of operation, where a list of duplicate audio files can be brought up. *Id.* at [0042]. The owner can then flag duplicates for deletion. *Id.* at [0103]. Unfortunately, *Myers* fails to enable one of ordinary skill in the art to practice the duplication detection and deletion operation since *Myers* is silent regarding how to detect duplicate audio files.

The prior art, however, provides a plethora of audio detection schemes; for example, *Dworak* explicitly teaches fingerprinting audio files so duplicates can be located in a music database. *Dworak* at [0013]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement duplicate audio detection using the

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fingerprinting method taught by *Dworak* since *Myers* is otherwise silent regarding how to detect duplicates.

With respect to the claim language, the fingerprinting component taught by *Dworak* corresponds to the fingerprinting component as claimed since it generates fingerprints for all audio files in a music database. *Id.* *Dworak* further teaches that two fingerprints are marked as “identical” based on their distance, as determined by the sum of their squared differences. *Id.* at [0040]. Thus, when the *Dworak* detector is employed in *Myers*, two files determined to be duplicates based on their distances are output in the owner screen, which corresponds to tagging them for potential removal since the owner will delete duplicates. *See Myers* at [0103]. Therefore, *Myers* in view of *Dworak* makes obvious all limitations of the claim.

**Claim 2** is limited to the system of claim 1, as covered by *Myers* in view of *Dworak*. *Dworak* teaches marking two audio fingerprints as identical when their distances are below a threshold. *Dworak* at [0040]. Therefore, *Myers* in view of *Dworak* makes obvious all limitations of the claim.

**Claim 3** is limited to the system of claim 1, as covered by *Myers* in view of *Dworak*. *Dworak* teaches that marking two audio fingerprints as identical requires measuring the distance between the fingerprints. Distance is measured between two audio files by the sum-of-the-squared-differences, where the differences are determined between fingerprints  $a'_{z,n}$  and  $b'_{z,n}$ , where  $z$  represents a plurality of time indices for each audio file. *Dworak* at [0040]. Therefore, *Myers* in view of *Dworak* makes obvious all limitations of the claim.

**Claim 5** is limited to the system of claim 1, as covered by *Myers* in view of *Dworak*. *Dworak* teaches generating a fingerprint with  $4 \times 9$  values—that is, four periods  $z$  by nine spectral

components n. *Dworak* at [0030]. Although the period analyzed is more than one second of audio, the fingerprint only consists of 36 numbers. However, *Dworak* explicitly recognizes that alternative values may be chosen including 64. *See id.* at [0035]. Moreover, since applicant fails to specify the criticality of using 64 floating point numbers (paragraph [0010], for instance indicates that 64 is merely exemplary, and that other values could also be used), it would have been obvious to one of ordinary skill in the art to use 64 floating point numbers as a matter of design choice.

It is further noted that neither *Myers* nor *Dworak* teach using floating point (or fixed point) numbers in fingerprint calculation. The examiner takes Official Notice of the fact that floating point numbers were well known for use in computerized calculations. Floating point numbers allow for far greater precision in representing numbers than fixed point numbers. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to perform fingerprint calculation with floating point arithmetic units since their precision allows retention of the most information.

**Claim 6** is limited to the system of claim 1, as covered by *Myers* in view of *Dworak*. This claim refers to two databases containing a plurality of data. However, only the fingerprint datum is logically linked to any other system elements. The other data correspond to nonfunctional descriptive material and are accorded weight only as general data within a database. *See In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). *Dworak* teaches both databases, the fingerprints and the other general data. *See Dworak* at [0053] (the method is computerized, meaning it requires a first database containing the stored fingerprints and a second database

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containing other data, such as computer instructions). Therefore, *Myers* in view of *Dworak* makes obvious all limitations of the claim.

**Claim 10** is limited to the system of claim 1, as covered by *Myers* in view of *Dworak*. *Myers* discloses outputting a list of detected duplicate audio files. *Myers* at [0103]. Since the jukebox system of *Myers* is computerized, it follows that the generated output list is stored in a memory corresponding to the claimed database. *See id.* at fig.1. Therefore, *Myers* in view of *Dworak* makes obvious all limitations of the claim.

**Claim 11** is limited to the system of claim 10, as covered by *Myers* in view of *Dworak*. This claim recites logging error conditions while processing the audio files and outputting a list of files associated with the error conditions to the user interface. While the cited prior art does not teach this limitation, the examiner takes Official Notice of the fact that tracking and reporting file I/O errors—such as a failed attempt to open a file locked for editing or recently deleted—was well known at the time of the invention for use in graphical environments. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to simply track and report file I/O errors.

**Claim 13** is limited to the system of claim 1, as covered by *Myers* in view of *Dworak*. The methods of *Myers* and *Dworak* are computerized; meaning the combined system of those two references comprises a computer readable medium having computer readable instructions stored thereon for implementing the fingerprinting component and the detector of claim 1. *See Myers* at fig.1; *Dworak* at [0053]. Therefore, *Myers* in view of *Dworak* makes obvious all limitations of the claim.

2. **Claims 4 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Myers* in view of *Dworak* and further in view of US Patent Application Publication 2003/0191764 A1 (effective filing date of 13 March 2002) (herein *Richards*).**

**Claim 4** is limited to the system of claim 3, as covered by *Myers* in view of *Dworak*.

The fingerprinting method of *Dworak* includes receiving a computer instruction containing the length of *z*, which corresponds to a time window, but does not include accepting a time offset into the audio file. *See Dworak* at [0030] & [0053]. Nevertheless, *Richards* suggests fast forwarding to the first non-silent sample within an audio file before performing fingerprint analysis. *Richards* at [0041]. The obvious benefit of doing so is reducing the amount of time spent processing samples that yield trivial results—i.e., zero. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a time offset into the audio file for initial processing as taught by *Richards* to realize the aforementioned advantage.

**Claim 7** is limited to the system of claim 4, as covered by *Myers* in view of *Dworak*.

*Dworak* teaches computing fingerprints for all indexed audio files within a database to determine fingerprints at time windows *z* and comparing the time windows against each other. *See Dworak* at [0013], [0030] & [0040]. The comparison results yields an identical file having the best set of matching time windows/locations *z* is flagged as a duplicate. *Id* at [0040]. Therefore, *Myers* in view of *Dworak* makes obvious all limitations of the claim.

**Claim 8** is limited to the system of claim 7, as covered by *Myers* in view of *Dworak*.

The GUI of *Myers* displays a list of duplicate audio files arranged by their song title. *Myers* at [0042] & [0103]. This requires that the detector, formed by the combination of *Myers* and

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*Dworak*, also determine the identity of audio files determined to be duplicates so they can be displayed. Therefore, *Myers* in view of *Dworak* makes obvious all limitations of the claim.

**Claim 9** is limited to the system of claim 8, as covered by *Myers* in view of *Dworak*.

The identity disclosed by *Myers* is the song title, which corresponds to metadata associated with an audio file. *Myers* at [0042]. Therefore, *Myers* in view of *Dworak* makes obvious all limitations of the claim.

#### ***Allowable Subject Matter***

3. **Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

**Claim 12** is limited to the system of claim 1, as covered by *Myers* in view of *Dworak*.

While the prior combination of *Myers* and *Dvorak* makes obvious detecting duplicates using audio fingerprints, there is simply no suggestion found in these references to use a veto fingerprint to detect noisy audio files. Thus, claim 12 is allowable over the cited prior art.

#### ***Conclusion***

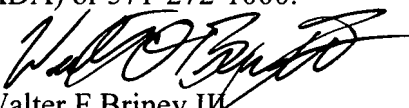
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Walter F Briney II  
Examiner  
Art Unit 2615

10/1/07